

Remarks/Arguments:

Applicants' disclosure is directed to a vacuum heat insulator. The vacuum heat insulator generally includes a core material and an enveloping member which covers the core material. In an exemplary embodiment disclosed in Applicants' specification, the enveloping member is welded to a fin. The fin is disposed on a low-temperature side of a heat-insulating surface of the vacuum heat insulator.

Claims 15, 17, 22-29 and 32-35 stand rejected under 35 U.S.C. § 103(a) as obvious over Wynne (U.S. Patent No. 5,900,299), Mitsuhiro et al. (JP 2001-141179) and Akinori (JP 2001-265138). Claims 30 and 31 stand rejected under 35 U.S.C. § 103(a) as obvious over Wynne, Mitsuhiro, Akinori and Japanese Patent Document 107427/1990. It is respectfully submitted, however, that the claims are patentable over the art of record for the reasons set forth below.

Wynne, Mitsuhiro and Akinori are directed to vacuum heat insulating devices. Wynne discloses an insulating device that "includes a plurality of polyester or MYLAR layers including an inner layer of heat-sealable polyethylene and an outer materialized or aluminum layer which is formed by laminating a metal foil to the film layer or by metal deposition on the layer." See Wynne at col. 2, lines 63-67. Mitsuhiro and Akinori disclose insulating devices which may be used in the presence of temperatures of 100°C and 200°C, respectively. See Mitsuhiro (Abstract) and Akinori (paragraph 0004).

Applicants' invention, as recited by claim 15, includes a feature which is neither disclosed nor suggested by the art of record, namely:

...an enveloping layer...including:

...a heat seal layer...

...a protective layer...

...a fin to which the enveloping member is welded...

...wherein a melting point of the heat seal layer is above 100°C and below 200°C, a melting point of the protective layer is at least 200°C, at least the fin is disposed on a low-temperature side of a heat-insulating surface of the vacuum heat insulator, and the vacuum heat insulator blocks thermal effect of the heat source on the member to be protected. (Emphasis added).

This feature is described in the originally filed application at page 12, lines 3-22 and is illustrated in FIG. 5.

With respect to Applicants' "fin," the Examiner argues that "[i]t would have been logical for one of ordinary skill in the art to position the side of the insulator [in Wynne] with the heat sealed joints away from the heat source since the joint areas are [the] most likely area[s] to degrade and allow the vacuum to be compromised." However, while an Examiner may rely on logic and sound scientific principle to support an obviousness rejection, the Examiner must provide evidentiary support. See MPEP 2144.02. Here, the Examiner has not provided evidentiary support to support the conclusion that "[i]t would have been logical for one of ordinary skill in the art to position the side of the insulator [in Wynne] with the heat sealed joints away from the heat source since the joint areas are [the] most likely area[s] to degrade and allow the vacuum to be compromised." Applicants respectfully request that the Examiner either provide evidentiary support or withdraw the rejection of claim 15.

While Wynne discloses that "the heat-sealed peripheral edge portions of the enclosure 40 are folded back and attached by adhesive or tape to the adjacent side surfaces of the panel 10, as shown in FIG. 1," Wynne does not provide any reasoning for so doing. See Wynne col. 3, lines 63-66 and FIG. 1. Indeed, other embodiments disclosed in Wynne imply that the reason is merely aesthetic because in the other embodiments, the heat-sealed peripheral edge portions are not folded back. See, e.g., FIGS. 5-9. Additionally, in the embodiment shown in FIG. 9, the heat-sealed peripheral edge portions 44 cannot be folded back on a low-temperature side. That is, as shown in FIG. 9, the heat-sealed peripheral edge portions 44 are pulled tightly against the box-shaped core on at least 3 different side surfaces. Thus, it would not be possible to fold all of the edge portions 44 onto one side surface of the device.

Accordingly, the examiner has failed to make out a prima facie case of obviousness. Claim 15 is, therefore, patentable over the art of record for the reasons set forth above.

Claims 17 and 22, while not identical to claim 15, include features similar to claim 15. Accordingly, claims 17 and 22 are also patentable over the art of record for the reasons set forth above.

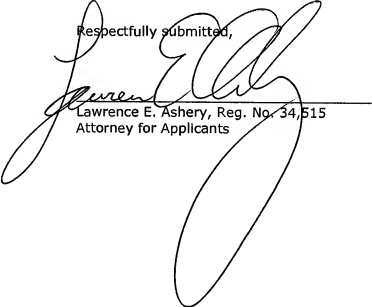
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Claims 23-31 include all features of claim 22 from which they depend. Claims 32 and 34 include all features of claim 15 from which they depend. Claims 33 and 35 include all features of claim 17 from which they depend. Thus, claims 23-35 are also patentable over the art of record for the reasons set forth above.

In view of the amendments and arguments set forth above, the above-identified application is in condition for allowance which action is respectfully requested.

Respectfully submitted,



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